

REMARKS

Summary

In this Office Action, claims 1-8 and 19-23 stand rejected. Specifically, claims 1-8 and 19-23 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 6,405,431 issued to Shin et al. (hereinafter "*Shin*"). Further, claims 19-23 stand rejected under 35 U.S.C. § 103 as being unpatentable over Shin in view U.S. Patent 6,717,264 issued to Ho et al. (hereinafter "*Ho*").

Thus, claims 1-8 and 19-23 currently are pending.

In response, claim 6 has been canceled thereby rendering moot rejection thereof. In addition, claims 1 and 19 have been amended without departing from the scope of the original disclosure and without introducing new matter, placing said claim and claims 2-5, 7, 8, and 19-23 which depend therefrom in condition of allowance.

Claim Rejections under 35 U.S.C. § 102(a)

Claims 1-8 and 19-23 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Shin*. In response, claim 6 has been canceled thereby rendering moot rejection thereof. In addition, claim 1 has been amended, placing claim 1 and claims 2-5, 7, 8, and 19-23 in condition of allowance.

Independent claim 1, as amended, is directed to an electronic substrate comprising a substrate having two or more electrically conductive inner layers, and one or more interconnect cavities. A conductive liner is disposed within, but not extending out of, one of the interconnect cavities and a reflowable interconnect material is disposed in part outside the one interconnect cavity and in part inside the one interconnect cavity, the interconnect material configured to directly interconnect each of a surface mount technology component and two or more of the electrically conductive inner layers.

In contrast, *Shin* cannot be said to teach an electronic substrate comprising an interconnect cavity having a conductive liner disposed within, but not extending out of, one of the interconnect cavities and further having a reflowable interconnect material disposed in part outside the interconnect cavity and in part inside the interconnect cavity to directly interconnect each of a surface mount technology component and two or more of the electrically conductive inner layers.

Rather, *Shin* teaches a via 69a, over which an electroplated layer 46 is formed. The electroplated layer extends out of the via to form a printed circuit pattern. See *Shin*, Fig. 4e, 4f; 7:64-8:5. Thus, *Shin* cannot be said to teach an interconnect cavity having a conductive liner disposed within, but not extending out of, one of the interconnect cavity

Further, *Shin* fails to teach the interconnect cavity having a reflowable interconnect material disposed in part outside the interconnect cavity and in part inside the interconnect cavity. Even if one were to consider *Shin*'s electroplated layer to be a reflowable interconnect material, it could not be said that *Shin*'s electroplated layer directly interconnects each of a surface mount technology component and two or more of the electrically conductive inner layers. Rather, *Shin* appears to be directed to a method of forming a redistribution layer rather than exposing inner layers for direct interconnection with surface mount technology components. Therefore, for at least these reasons, Applicants respectfully submit claim 1 is patentable over *Shin*.

Claim 19, as amended, includes similar features as claim 1 and therefore is also patentable over *Shin*. Claims 2-5, 7, 8, and 20-23 depend from one of claims 1 and 19, and for at least the same reasons discussed above as they relate to claims 1 and 19, also are patentable over *Shin*.

Claim Rejections under 35 U.S.C. § 103

Claims 19-23 stand rejected under 35 U.S.C. § 103 as being unpatentable over *Shin* in view of *Ho*. *Ho* does not remedy the above-discussed deficiencies of *Shin* and thus, for at least the same reasons discussed above, claim 19 remains patentable over

Shin even when combined with *Ho*. Furthermore, claims 20-23 depend from claim 19, thereby incorporating the limitations of claim 19, and therefore also are patentable over *Shin* even when combined with *Ho*.

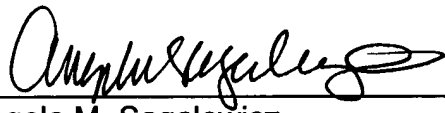
CONCLUSION

In view of the foregoing, Applicants respectfully submits that claims 1-5, 7, 8, and 19-23 are in condition of allowance. Thus, entry of the offered amendments and early issuance of Notice of Allowance is respectfully requested.

The Commissioner is hereby authorized to charge shortages or credit overpayments to Deposit Account No. 500393.

Respectfully submitted,
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